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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,165	01/12/2001	Seiji Umemoto	Q62649	9366

7590

03/28/2003

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EXAMINER

NGUYEN, THONG Q

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application

09/758,165

Applicant(s)

UMEMOTO ET AL.

Examiner

Thong Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2003 and 03 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-41 is/are pending in the application.
- 4a) Of the above claim(s) 12-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 and 39-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 3, 2003 has been entered.

### ***Drawings***

2. The formal drawings contain six sheets of figures 1A-14 filed by the applicant on 1/31/2003 have been received by the Office and approved by the examiner.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification fails to provide a proper antecedent basis for the structure recited in the claim 8. In particular, the specification does not provide support for the feature of "projected area of said discontinuous grooves onto an area of said film plane is not larger than 10%" (claim 8, last two lines).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(f) he did not himself invent the subject matter sought to be patented.

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5. Claims 1, 4 and 41 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

The device as claimed in claims 1, 4 and 41 is disclosed in the Japanese Patent No. 2000-147499 which is issued to a set of inventors including Komura Shinichi; Funahata Kazuyuki; Yano Shuji and Hiyama Ikuo who are not listed in the entity of the present U.S. application.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3-4, 8-10, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciupke et al (U.S. Patent No. 5,461,547) in view of Bao et al (EP 867 747, of record).

Ciupke et al disclose a flat panel display lighting system. The system as described in columns 2-3 and shown in figures 1-2 comprises a light guide (11) having upper surface and a lower surface wherein a prismatic configuration is formed on the lower surface of the light guide; a diffusing element (31) disposed adjacent to the upper surface of the light guide (11) and a reflecting element (27) disposed adjacent to the lower surface having prismatic configuration of the light guide. The prismatic configuration formed on the lower surface of the light guide (11) comprises a set of discontinuous grooves (17) wherein each groove is shaped as an isosceles triangular having two facets (16) which facet is oriented in an angle in the range of 35 degrees to 45 degrees with respect to the plane of

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the lower surface. With regard to the feature relating to the flat areas as recited in last four lines of the claim 1, it is noted that the flat area defined between two adjacent grooves has an inclination of zero degree and the sum of the projected area of all flat areas of the prismatic configurations is not smaller than 10 times as large as a projected area of the slopes having inclination angle not smaller than 35 degrees. It is also noted that the total area taken by the grooves 917) is small in comparison with the area taken by the flat areas. The support for that conclusion is found in column 3 and figure 2 in which the dimension of each flat area is from 100-250 micrometers and the dimension of the groove is relative small. With regard to the feature relating to the shape of the groove, i.e., polygon, as recited in claim 8, such feature is readable from the shape of the groove as disclosed by Ciupke et al because claim 39/8 recites the shape is a triangular shape. With regard to the dimension of the light guide, i.e., 300 micrometers, such feature is considered as an obvious matter to one skilled in the art for use a thin light guide in a display system for the purpose of providing a lightweight device. Further, the unit used in the patent is micrometers.

As a result, the device of Ciupke et al meets all of the limitations of the device as claimed except the use of an adhesive layer having similar refractive index as that of the light guide. However, the use of an adhesive having similar refractive index with an light guide for the purpose of bonding the light guide to another optical element for the purpose of eliminating the harmful light or the contrast of the device is known to one skilled in the art as can be seen in the system

provided by Bao et al. In particular, in columns 14-15 and figs. 9-11, the transparent light guide (20) having two surfaces in which one surface comprises a pattern of prismatic elements and the other surface comprises an adhesive layer (40a) for bonding the light guide to a panel (O). It is also noted that the material for making the adhesive layer (40a) is a resin having its refractive index matching with the refractive index of the transparent guide light (20) and the panel (O). See column 14, for example. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the system provided by Ciupke et al by using an adhesive having refractive index similar to the light guide for bonding the light guide to the diffusing element for the purpose of eliminating the harmful light or the contrast of the device.

8. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciupke et al in view of Bao et al as applied to claim 1 above, and further in view of the Japanese reference No. 11-142618 (of record).

The combined product as provided by Ciupke et al and Bao et al does not disclose that the adhesive layer is a diffusing layer cover with a strip sheet. However, the use of a strip sheet for covering the adhesive layer when it is not placed in use to prevent the damage to the adhesive layer is known to one skilled in the art as can be seen in the optical film provided in the Japanese reference '618. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the optical film as provided by Ciupke et al and Bao et al by using an adhesive layer having a diffusing feature and a strip sheet

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as suggested by the Japanese reference '618 for the purpose of providing an adhesive layer having a diffusing feature and the strip sheet is removably used to protect the layer before it is placed in use.

9. Claims 5, 7 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciupke et al in view of Bao et al as applied to claims 1 and 8 above, and further in view of Yokoyama et al (U.S. Patent No. 5,584,556, of record).

The combined product provided by Ciupke et al and Bao et al does not disclose that the grooves formed on the surface of the light guide are arranged in a continuous manner. However, rearrangement the grooves of a prismatic structure in a discontinuous manner or a continuous manner is clearly an obvious matter to one skilled in the art in the process of adjusting the illuminating pattern of a device. Both the mentioned arrangements of the grooves on a surface of a light guide are disclosed in the art as can be seen in the system provided by Yokoyama et al. For instance, the arrangement of the grooves in a discontinuous manner is shown in the embodiments shown in figures 2-18 while the arrangement of the grooves in a continuous manner is shown in the embodiment of figures 19, 23-29. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the combined product provided by Ciupke et al and Bao et al by rearranging the grooves of the prismatic structure including the continuous manner of the grooves as suggested by Yokoyama et al for the purpose of adjusting the illuminating pattern of the device.

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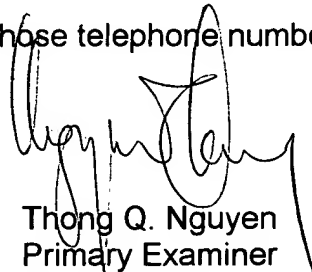
***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (703) 308-4814. The examiner can normally be reached on M-F.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Thong Q. Nguyen  
Primary Examiner  
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March 20, 2003